Synthesis of S-nitrosocysteine

hydrogels

Synthesis of copolymer

2. Formation of S-nitrosocysteine

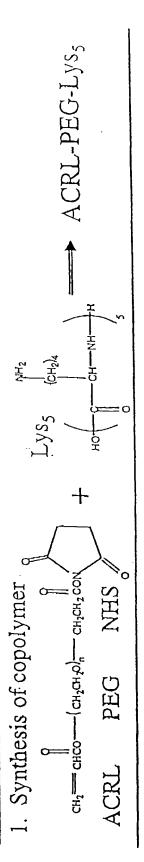
CysNO

phenylacetophenone

+ 2,2-Dimethoxy-2-

DOESHUS "DSUIDO

nucleophile complex hydrogels Synthesis of Lys₅-NO-



2. Formation of NO-nucleophile complex

ACRL-PEG-Lys₅ + NO gas in H₂O — ACRL-PEG-(Lys-[N(0)NO]-)₅

3. Photopolymerization

ACRL-PEG-(Lys-[N(O)NO]-)₄ PEG(ACRL)₂ UV (Lys-[N(O)NO]-) henylacetophenone
$$G_{H_2} = G_{H_2} = G_{H_2$$

4. Release of NO

$$(Lys-[N(O)NO]^{-})_{5}$$
 $pH 7.4$ $DH 7.4$

Synthesis of DETA-NO-

nucleophile complex hydrogels

Synthesis of copolymer,

2. Formation of NO-nucleophile complex

3. Photopolymerization

ACRL-PEG-DETA-[N(O)NO]- PEG(ACRL)₂ UV DETA-[N (O)NO]- Pt.2.2-Dimethoxy-2-
$$\begin{pmatrix} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ &$$

4. Release of NO

FIGURE 3

NO Release from PEG-Lys $_5$ -NO

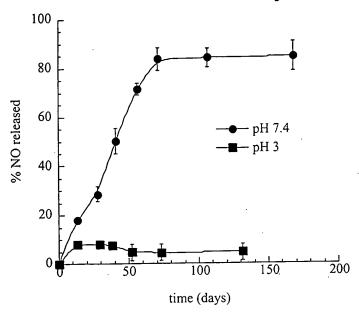
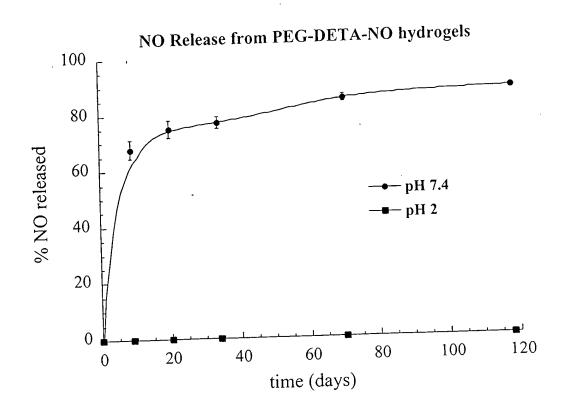


FIGURE 4



NO Release from PEG-Cys-NO hydrogels

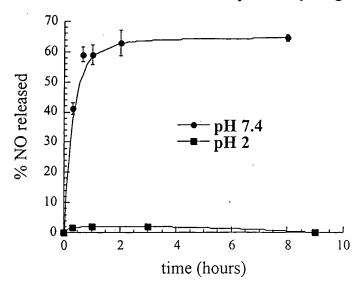


FIGURE 6

NO release from PVA-NO-bFGF hydrogels

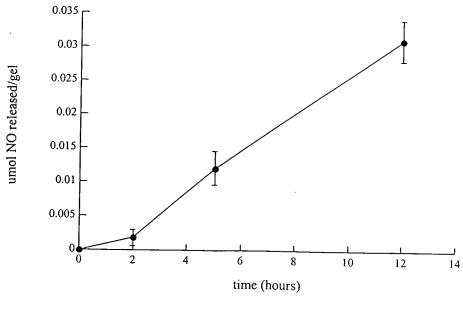
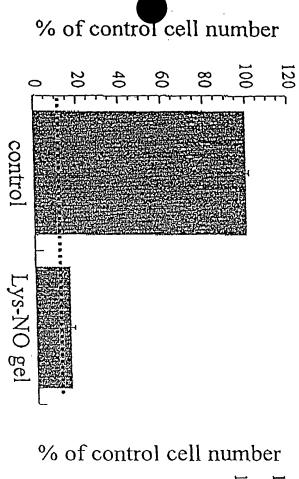


Figure 7

Lys-NO hydrogels roliferation inhibit SMC



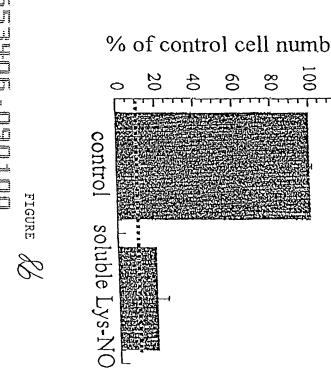
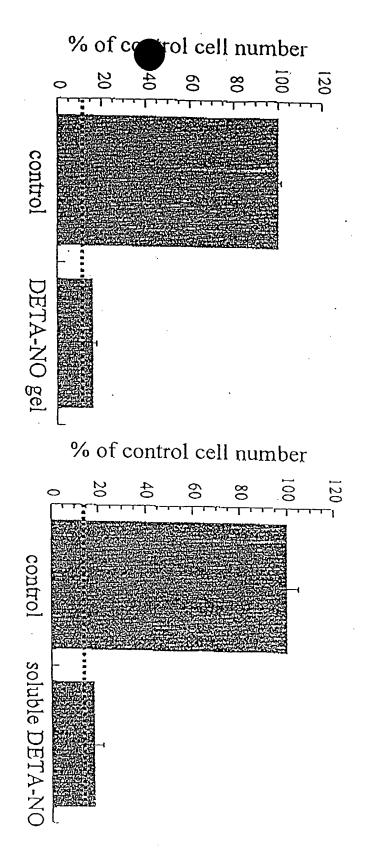


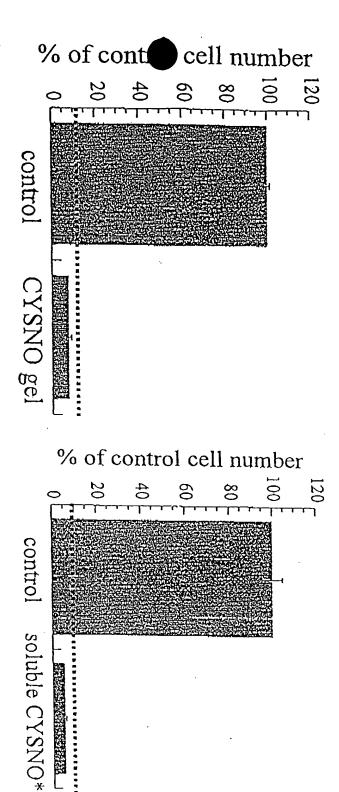
FIGURE 8A

OSETHOE LOSCIOO

[A-NO hydrogels proliferation



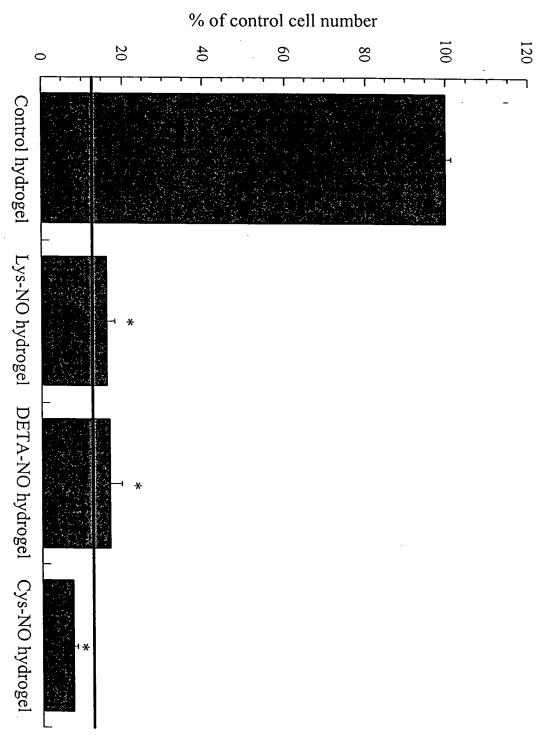
TYSNO hydrogels inhibit SMC roliferation



* indicates different CYSNO concentration than used for hydrogel

FIGURE 10A

NO-releasing hydrogels inhibit smooth muscle cell growth



NO release from PVA-NO-bFGF hydrogels

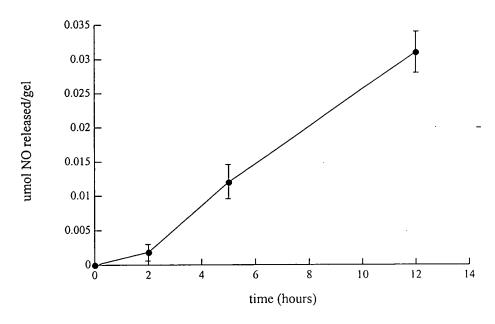


Figure 12A

bFGF release from PVA-NO-bFGF hydrogels

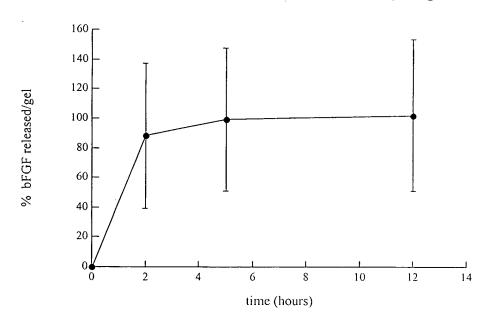


Figure 12B